

Colorado Department of Public Health and Environment
Hazardous Materials and Waste Management Division

Comments

Draft Proposed Action Memorandum Hot Spot Removal
Rocky Flats Plant (Operable Unit No 1) June 1994

GENERAL COMMENTS

Completeness of Proposed Action Memorandum The proposed modification to the IAG describing Accelerated Response Actions lists several specific items that a Proposed Action Memorandum (PAM) must contain. The Division has reviewed these requirements and determined that this draft PAM currently does not adequately address several required items. The Division's findings and comments on each specific requirement are detailed below. All deficiencies identified must be corrected before the Division can consider this PAM to be complete.

- Brief Summary of the Data for the Site A summary of data for the site is presented in section 2.4 Release or Threatened Release into the Environment of a Hazardous Substance Pollutant or Contaminant along with a discussion of the potential for radionuclide migration. This section partially satisfies the requirement for the PAM to include a brief summary of site data. The Division believes additional site data relevant to this action is available. Missing from this section is any discussion of data for metals at or near the OU1 hot spots. This information is of particular interest since several metals were detected at elevated levels at or near the hot spot locations. A table reporting and summarizing complete analytical results for the four hot spot locations and near by surficial soil and borehole sampling locations should also be included in the PAM.
- Explanation of the Proposed Action An explanation of the proposed action should be included in Section 1.0 Purpose of the PAM. Section 1.0 currently touches on the administrative requirements for the hot spot removal action but does not explain what action is specifically being proposed. A description of the proposed removal action is not presented until deep in the PAM specifically in section 5.0 Alternative Accelerated Response Actions on page 24 of the PAM. The description presented in section 5 is very brief and lacks many details relevant to this action such as the expected size of the excavation and specific dust control measures to be utilized.
- Waste Management Considerations Waste management considerations are discussed in section 5.1.1 of the PAM. The Division is pleased to see that a storage unit has been identified for this waste. This section states that the excavated materials will be managed in accordance with Colorado Hazardous Waste Act (CHWA) requirements. The PAM must include or reference the waste management requirements of the storage unit per the permit. Additionally no DOE or CERCLA requirements for the management of radioactive waste or mixed waste are identified in the PAM. Specific CHWA and other requirements applicable to waste management must be fully addressed in the PAM.
- Brief Explanation of how the Proposed Action is consistent with Long Term Remedial Action Objectives The consistency of this action with long term remedial action objectives is discussed in section 5.2.1.1 Screening of Options. In this section the PAM states that this action should be consistent with future long-term clean up plans because it permanently reduces health risks and contaminant migration potential at OU1. This discussion satisfies this PAM requirement however the Division recommends that this information be added to the introduction of the PAM.
- Implementation Schedule and Completion Date for the Proposed Action Section 6.2 of the PAM very briefly discussed the schedule for this project. The section states that the removal action is scheduled to begin September 20 1994 and continue for 10 working days. This section fails to list a completion date for the proposed action as specified in the proposed IAG language. Additionally this schedule is inconsistent with information

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submitted to the Division supporting the cost estimate that showed 5 days mobilization and 5 days demobilization in addition to the 10 days removal activity for a total of 20 working days of field activities

- Identification of All ARARs Specifically Related to the Proposed Action In 5 2 2 2 Institutional Factors ARARs are identified for the removal action. The ARARs identified are limited to federal ARARs practicable for this removal and Colorado ARARs relevant to this removal. The ARARs identification is limited to broad citations of the Acts and regulations applicable to the removal. This section does not meet the PAM requirement of identifying all ARARs specifically related to the proposed action. The Division believes that a detailed ARARs identification must be included in this PAM to meet the requirements of the proposed accelerated response action language.

Project Costs At the request of the EPA a review of the projected cost of this removal action was presented to the Division staff at a meeting on August 3 1994. This comment is in response to both the information contained in the PAM and the supplemental cost information presented at the August 3 1994 meeting.

The Division is shocked by the extremely high cost estimate that DOE has presented for what appears to be a simple removal action. The resources that DOE has committed to this removal action are excessive, unnecessary, inefficient and wasteful of taxpayer money. The Division fails to see how the DOE can claim that this removal is cost effective. The extreme cost combined with the failure to consider the cost of other options does not support this conclusion. In addition, the cost of this action considered against the relatively small risk reduction raises questions as to whether the action should be taken at all.

The Division requests specific justification for why this action costs \$65 000 per cubic yard of removed soil. This justification must include rational and specific tasks for each of the 9 full time support personnel to the 4 personnel actually doing the removal during the soil removal phase of the project. The Division recommends that the DOE critically review all aspects of this project and make all appropriate cost cuts before presenting such justification. Cost saving recommendations are presented in the Division's comments below.

Waste Characterization The Division was presented additional detailed cost estimates for this PAM at a meeting with the DOE, EPA and EG&G staff on August 3 1994. Based on those cost estimates, a significant portion of removal costs are associated with waste characterization. A meeting was held between the Division, DOE and EG&G staff on August 4 1994 to review the waste characterization requirements for this hot spot removal action. During that meeting it was agreed that the extensive waste characterization proposed for this removal action is based on current waste acceptance criteria for the Nevada Test Site (NTS).

None of the waste characterization sampling proposed in this PAM is required by the Division for on-site waste storage. The Division believes that sample results from the OUI RFI/RI investigation are sufficient to make a hazardous waste determination and adequately characterize the soils proposed to be excavated for on-site waste storage.

The cost of collecting and analyzing waste characterization samples to meet current NTS waste acceptance requirements is over \$150 000, over 38% of the total project cost. The NTS is not currently accepting mixed waste or non-hazardous radioactive waste. There is no guarantee that current NTS waste acceptance criteria will be adequate when NTS reopens or begins accepting mixed waste. The risk of conducting unnecessary analysis or having to resample to meet revised waste acceptance criteria

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is high and can be avoided by delaying waste disposal sampling until a disposal site is truly available and waste acceptance criteria finalized. Further, it is the Division's understanding that other options for the treatment or disposal of this waste are also being considered which could make the proposed waste characterization sampling useless.

Therefore, the Division recommends that DOE remove the proposed waste characterization sampling and analysis from this removal action, reducing the cost of the action by over \$150,000.

Prevention of Contaminant Dispersion Potential worker exposure to radionuclides in dust generated during excavation is one of the greatest hazards associated with this removal action. The PAM states that appropriate dust control measures to mitigate potential contaminant migration during excavation will be applied. This statement is not sufficient to ensure to the Division that all necessary measures for the protection of workers and prevention of contaminant migration will be implemented. The prevention of contaminant dispersion is addressed in the Final Plan for Prevention of Contaminant Dispersion, February 1992 (PPCD). The Division requires that this approved primary IAG document be utilized in determining specific dust control measures for this action and referenced in the PAM. Additionally, the PAM must identify the specific dust suppression techniques, air monitoring instruments, and action/alarm levels determined through the PPCD methodology to be employed during this removal action.

Alternative Evaluation The Division was not aware that alternatives to the removal were being considered. Not enough information has been presented to adequately compare all of the alternatives presented. An incomplete alternatives analysis is of little value. Specifically, the relative costs of each alternative are missing. The use of fences or other institutional actions to limit access to the hot spots until a final remedy is selected was not considered as an alternative in this analysis. Alternatives were arbitrarily rejected because they could not be implemented in less than six months. Failure to meet the implementation time frame for an accelerated action should not preclude an otherwise superior action from being selected. Alternatives should be considered on their technical merits. The Division recommends that either a complete alternatives analysis be conducted and presented in the PAM or the proposed action be presented singularly as a presumptive remedy.

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SPECIFIC COMMENTS

Section 2 4 1, Page 14 The test states that the sample hole as SS100493 was terminated at 10 inches because a large rock was encountered. The presence of a large rock raised several questions regarding the removal that are not addressed in the PAM. Specifically, is the rock big enough to cause concern during the removal? Have contingencies been developed for the removal and disposal of the contaminated rock? Is the rock too big to fit into a drum? Will the rock be broken in place before removal? Does the DOE expect to be able to decontaminate the rock?

Section 2 4 2 1, Page 15 The text in this section states that the immobility of plutonium and americium in the environment is a given. The Division does not agree with this hypothesis. It has been shown that both Pu and Am contaminants at the Los Alamos National Laboratory are mobile in the environment (Environ Sci Technol Vol 23 No 5 1989 page 496 502). Additionally, the PAM sites potential migration of radionuclides in the environment as rational for this action.

Section 5 2 2 3, page 28 The text states that this cost estimate does not include any costs for treatment or disposal of the soils. This statement is not accurate. The waste characterization sampling detailed in the sampling and analysis plan is directly attributed to waste acceptance criteria at the Nevada Test Site (NTS) a future waste disposal option. Specifically, costs directly attributed to waste disposal include sample collection and packaging (\$21 149), lab confirmation and data validation (\$123 525), incorporate data into RFEDS (\$3 337) and data quality review (\$2055). Therefore, \$150 066 or over 38% of the estimated \$390 000 project costs are actually waste disposal costs. The Division's recommendation on the elimination of this waste characterization sampling is discussed in the Division's general comments above.

Section 6 1, page 28 The Division does not believe that sufficient information has been presented to support the DOE's finding that this action is cost effective. The Division requests that the rationale for finding this project to be cost effective and the DOE's definition or criteria of cost effective projects be briefly summarized in this PAM.

Section 8 0, Page 29 Although this document was prepared by a DOE subcontractor it is a DOE document. This document is a proposed action, not a recommended action.